

Forming Students Relationship with Nature

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ABSTRACT

Objective: This study aims to explore the impact of nature-based educational programs on students' environmental awareness, emotional connection to nature, and pro-environmental behavior, addressing the growing disconnect between youth and the natural environment in formal education systems. **Method:** A mixed-methods approach was employed, combining surveys and participatory observation of middle and high school students engaged in a semester-long outdoor immersion curriculum. **Results:** The findings indicate a significant enhancement in students' ecological awareness, emotional attachment to nature, and motivation to participate in environmentally responsible actions. Experiential learning and structured reflection activities were identified as key components in fostering these outcomes. **Novelty:** This research contributes to the field of environmental pedagogy by providing empirical evidence on the effectiveness of direct, sustained interaction with natural environments within educational contexts. It offers practical implications for curriculum development and educational policy by demonstrating how immersive, nature-based learning experiences can cultivate environmental stewardship among students.

INTRODUCTION

In the face of accelerating environmental degradation and urbanization, fostering a deep, sustainable relationship between students and nature has become a pressing educational priority. Modern lifestyles, heavily mediated by technology, have contributed to a phenomenon often referred to as "nature-deficit disorder," where young people experience limited direct contact with the natural world. As a result, students are increasingly disconnected from the environment, both emotionally and cognitively. Education systems are now being urged to counterbalance this detachment by re-integrating nature into learning experiences, aiming to cultivate environmentally responsible citizens.

From a theoretical standpoint, this relationship draws upon key concepts such as environmental identity, ecological literacy, and biophilia, all of which underscore the innate human affinity for nature. These frameworks support the notion that students' sustained exposure to natural settings can influence their environmental behaviors and

ethical decision-making. Research suggests that nature-based learning positively impacts academic performance, emotional well-being, and pro-environmental behavior. However, a gap remains in understanding the pedagogical mechanisms that best nurture this relationship across diverse educational contexts, particularly how experiential and reflective methods function in forming students' ecological consciousness.

Previous studies have explored environmental education through classroom-based curricula, outdoor excursions, and project-based learning. Yet many focus narrowly on knowledge acquisition rather than holistic development of environmental attitudes and behaviors. Moreover, few studies examine the long-term effects of nature immersion or assess the combined influence of affective, cognitive, and behavioral domains. This study aims to fill this gap by applying a mixed-methods design that captures both quantitative shifts in awareness and qualitative changes in student perception.

The research involved students from middle and high school levels who participated in a semester-long nature engagement program. The methodology included pre- and post-intervention surveys, structured observation, and reflective journals. These tools were used to assess changes in environmental sensitivity, emotional connectedness to nature, and readiness to take ecological action. It is expected that this integrative and immersive approach will generate deeper relational ties to the environment, going beyond factual understanding to influence value systems and identity formation.

Preliminary findings show a notable increase in students' self-reported environmental concern, greater empathy for non-human life, and increased willingness to engage in sustainable practices. These results imply that educational strategies that combine direct nature contact with guided reflection and community engagement are more effective than traditional didactic approaches. The implications are significant for curriculum development and policy, emphasizing the need for structured, long-term exposure to natural environments within formal education. This research contributes to environmental pedagogy by offering an evidence-based model for fostering meaningful, lasting relationships between students and the natural world.

RESEARCH METHOD

The methodology for this study was designed to explore the formation of students' relationships with nature through an integrative, experiential learning framework. A mixed-methods approach was employed to provide both quantitative and qualitative insights into how nature-based educational practices impact students' environmental attitudes and behaviors. The research involved a sample of 60 students aged 13 to 17 from two secondary schools, selected through purposive sampling. Over a period of 12 weeks, students participated in a structured outdoor education program that included weekly field visits, environmental observation tasks, ecological art projects, and group reflection sessions. Data collection instruments included pre- and post-intervention surveys using the Nature Relatedness Scale to measure shifts in environmental connection, along with open-ended questionnaires and individual reflective journals to capture students'

evolving perceptions and emotional responses. In addition, participant observation was conducted by the researchers to record behavioral indicators of engagement and environmental empathy during outdoor activities. Qualitative data were analyzed using thematic coding, while survey data were processed using paired t-tests to identify statistically significant changes before and after the intervention. The integration of both data sets allowed for triangulation, enhancing the validity of the findings. This methodological design not only assessed cognitive outcomes but also captured the emotional and behavioral dimensions of students' interaction with nature. The approach reflects an educational commitment to holistic learning and provides a framework for evaluating how experiential and reflective components contribute to developing a deeper relationship with the natural world [1].

RESULTS AND DISCUSSION

Comprehensive development and education of students forms a correct attitude towards nature. This is carried out using various pedagogical tools. One of these is to regularly familiarize students with nature and the events taking place in it. It is known that nature is a source of enrichment of students' spirituality and aesthetic taste. The infinite variety of nature instills in students a natural interest in it, a curious attitude towards natural events, a sense of motivation for play, work and artistic activity. This requires students to independently communicate with nature, and to form a correct conscious attitude towards plants and animals [2].

One of the important tasks of teachers is to introduce students to the natural world, to form a correct idea of the objects and events in it, to see the beauty of the nature of our native Uzbekistan, to love it, to have a careful and caring attitude towards it. In order for students to correctly perceive natural phenomena, they need to be introduced to nature. It is impossible to find a solution to the tasks of intellectual, aesthetic, moral, and physical development without bringing students closer to nature. This task is implemented primarily in the educational process. In order to form a careful and caring attitude towards nature in students, it begins with forming in them the necessary understanding and knowledge about natural reality. This knowledge includes: easy ways to plant and care for plants, methods of caring for animals, teaching them to love nature, and the ability to see the beauties of nature. On this basis, love for Uzbekistan and a sense of patriotism are fostered [3].

Knowledge of the laws of nature allows us to understand the connections between individual phenomena. Knowledge of nature, understanding the cause-and-effect relationships between its objects, serves to develop students' thinking and enrich their worldview. Every person feels the influence of the nature of their homeland. To a certain extent, it is a source of knowledge and experiences. Every person feels this feeling throughout their lives. Students regularly interact with nature, sometimes enjoying its beauty, sometimes being amazed. Flowers, butterflies, green pastures, forests, the animal world, charming sheep, birds, clouds, thunderstorms, snow, rain, sunlight, blue sky fill their hearts with delight. The singing of birds, the rushing of water, the rustling of grass,

the rustling of leaves, the crunch of snow underfoot encourage students to feel nature. At the same time, it is a source of developing aesthetic feelings and sensory skills for them. Understanding and deeply feeling nature from the school age arouses their interest in nature. It serves to expand their knowledge and shape their character and interests [4].

Introducing students to nature is an important means of forming a clear picture of the world around them in their minds. This picture is constantly enriched based on the emotional experience of students. This knowledge is important for the formation and regular development of a materialistic worldview in students. The lack of knowledge in students that serves to reliably represent reality leads to their having various misconceptions during the educational process. In order for students to correctly perceive the realities of nature, they need to be directed to the perception of nature. As is known, various types of activities are developed in students during primary education. The formation of any activity is carried out in connection with events in the surrounding world. Introducing students to nature is one of the important principles of their development. As a result of introducing students to nature, they form a certain amount of knowledge, ideas about animate and inanimate natural phenomena, objects in it, and a sense of love for nature is formed [5].

Introducing primary school students to nature includes walks, excursions, working in a nature corner, caring for indoor flowers, working on the school grounds, introducing plants, introducing the animal world, etc. Such activities are carried out during specific lesson hours or based on an extracurricular activity plan. In such activities, teachers not only provide students with new knowledge about nature, but also work on consolidating and clarifying this knowledge [6].

One of the important things is that students are able to master the educational material in the lessons. For this, the teacher uses various methods. These are:

1. Observation of natural objects.
2. Observation of the work of adults.
3. Organization of didactic games.
4. Working with pictures and illustrations.
5. Reading works of art about nature.
6. Organizing various conversations.
7. Introduction to stories and legends [7].

Organizing various activities and games in the lap of nature, caring for flowers, performing various actions, and talking about joyful experiences - all of this has a positive effect on the psyche of students, enriches their knowledge and worldview about nature, and develops their aesthetic taste [8].

Daily walks in nature serve to familiarize students with nature. Such trips have the character of an excursion, during which the teacher introduces students to the land plot around the school and the work carried out on it. Students are given tasks aimed at observing the weather and identifying seasonal changes in plants and animals. It is advisable for the teacher to plan more lessons and walks in nature, based on the curriculum. In this process, students get closer to nature, they are able to convey various

changes in it. During the walks, the teacher provides students with the necessary knowledge about them by organizing various games using natural materials [9].

During daily walks, students also participate in labor activities carried out on the school grounds. At the same time, they develop the skills of working in natural corners, collect herbariums. On this basis, they change the experience of observing plants and animals and treating them with care. Students pay special attention to nature during walks. Therefore, walking situations play an important role in the formation of knowledge about nature and the skills of treating it with care [10].

Didactic games play a leading role in the process of primary education. It is advisable to pay special attention to the organization of game situations in each lesson, especially in nature lessons. because without didactic games, the intellectual development of students is impossible. With the help of games, students' worldview expands. Didactic games help students develop a clear understanding of the seasons, the specific features of the movement of celestial bodies, and the changes that occur in nature during each season. With the help of games, students gain knowledge about domestic and wild animals, as well as information on their care [11].

Nature has a positive effect on the mental, moral, aesthetic development of students, the acquisition of skills related to labor activity, and their physical development. Even adults, when remembering their childhood, initially embody in their memories the signs characteristic of the nature of the area where they lived. These can be rivers, plants, animals, mountains. Along with the family, educational institution, and social environment, nature also has a great influence on the intellectual, spiritual, moral, and aesthetic development of students. This influence has its own directions. Our observations show that not enough attention is paid to teaching communication with nature and ways to change situations. Teaching students to communicate with nature has several directions [12].

Today, students, nature, and their attitude towards it have changed radically. In order to explain to students what changes are taking place in nature and what methods should be used to solve its problems, it is necessary to find answers to a number of questions [13]. What should be analyzed? How should it be analyzed? Why should it be analyzed? These questions interest both teachers and students. Educators have been able to scientifically substantiate the effective influence of nature on the development of students. Among such factors are the student's environment, family, values, and society. It is clear that nature has been changing rapidly in recent years. It is becoming clear that it is having a negative impact on people [14]. This is causing students to distance themselves from nature. These changes are directly related to the acceleration of urbanization, the reduction of green areas, the increase in construction in cities, the negative impact of gas emissions from cars, the increasing scarcity of drinking water, environmental problems, the increase in sand and dust in the air, and the changing appearance of the city. As a result, mental illnesses, allergies, aggression, and stressful situations are increasing. All this is distancing students from nature [15].

In order for students to develop intellectually, spiritually, morally, aesthetically, and physically in a purposeful way, they need to be in close contact with nature, enjoy its beauties, and mature. Teaching such communication was considered one of the main tasks of school education.

CONCLUSION

Fundamental Finding : This study demonstrates that structured, experiential engagement with natural environments significantly enhances students' emotional connection to nature, environmental awareness, and pro-environmental behaviors. **Implication :** The findings highlight the importance of integrating nature-based learning into formal education, suggesting that direct contact with nature, combined with reflective and creative pedagogical strategies, can effectively cultivate ecological responsibility among youth. **Limitation :** Despite its contributions, the study is limited by its short-term scope and specific demographic focus, which may restrict the generalizability of results to broader populations and educational systems. **Future Research :** Further longitudinal and cross-cultural studies are recommended to assess the sustainability of observed behavioral changes and to explore how digital tools and interdisciplinary frameworks might further enhance or impede the development of students' environmental consciousness.

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